

HYDROSOCIAL CONFLICTS DUE TO ALIENATION OF ENDOGENOUS EPISTEMOLOGIES: ANALYSIS OF A COLOMBIAN ANDEAN TERRITORY

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ABSTRACT

This investigation examined social and environmental conflicts in peasant territories due to rural modernization common to the Colombian Andean region. For this purpose the author chose a constructivist analysis instead of the conventional paradigm about the water cycle, in order to question approaches alien to peasant social realities and their territorial dynamics. Therefore, the study criticizes from the conventional approach its assumed separation between humans and nature, its exclusive material and profit oriented valuation of water and surrounding territories, and its discrimination of other cultural, social, political, and biological valuations of water. Subsequently, the research applied a conceptual and methodological framework based on hydro-social cycles and participatory action research to analyze peasant territories in San Lorenzo (Tuluá, Colombia, South America) and identify alienation mechanisms of ancestral and endogenous epistemologies related to the social and environmental management of their territory. This has led to a marginalization of peasant communities and to a weakening of their identity and autonomy. The research also offered an analysis of the challenges faced by these communities to subsist in a context of climate variability and territorial globalization.

KEYWORDS: Social-Environmental Conflicts, Rural Modernization, Constructivist Analysis, Hydrosocial Cycles, Participatory Action Research, Endogenous Epistemologies, Territorial Globalization

INTRODUCTION

This article presents a critical analysis of social and environmental effects generated by rural modernization projects in countries where natural resources are abundant and are still inhabited by peasant populations following a traditional life-style. For this purpose, the author carried out a case study located in an Andean rural territory in Colombia (South America), rich in drinking water and mineral deposits. The investigation was performed using a constructivist approach based on the participatory action research (PAR) methodology. Therefore it offers a context of the problematic situation from the perspective of the peasant communities. Consequently, with the objective of understanding the communities perceptions, the researcher considered adequate to use the hydrosocial cycles analysis in order to identify and describe relationships and dynamics between different aspects, such as rural modernization, government policies and territorial development, institutional and entrepreneurial action, armed conflict, peasant marginalization, and environmental deterioration. The application of rural modernization projects bring about a central problem to the peasant communities that can be described as the alienation of their autonomy, ancestral knowledge, scientific and experimental abilities, and traditional life-principles. In that way, the peasant territory is made open to new developmental and environmental policies, with the creation of new private and public infrastructure and new forms of militarization and State control. This facilitates the establishment of extractive industries funded by transnational investments. This critical analyzes aspires to foster this

kind of investigation in other regions affected by socio-environmental conflicts and peasant marginalization related to rural modernization processes, in order to identify the real consequences of that developmental paradigm from the perspective of peasants that still feel bonds and respect to their territory. The research here presented also opens the way to continue the case study by analyzing the forms taken by peasant resistance in their territories.

The first part of this document explains and justifies the methodology's epistemological foundation. The second part presents the results and the analysis perspective applied to them. The third and final part presents the conclusions and acknowledgements to institutions and persons that were very helpful during the research.

RESEARCH METHODOLOGY

In order to analyze social relationships in peasant territories regarding their water and environmental management, this research considered most appropriate to adopt a constructivist approach, because it emphasizes the individuals as active creators of information. This assumes that all information is semiotically created or assimilated, because it is culturally codified and seeks knowledge objectives that can be individual or collective (Chadwick, 2001). According to the constructivist conceptual framework, information doesn't generate knowledge if there is not a praxis attached to it. Therefore, this framework is an alternative scientific approach that, thanks to its liberating pedagogy, can provide guidance to a transformation of the current capitalist dependence of peasant territories. It gives priority to the actor over the act itself, it doubts the existence of an objective reality which is fully comprehensible by reason and science, for it regards the concept of reason as a manifestation of gender imbalance and the imposition of patriarchal authoritarianism (Chadwick, 2001). Therefore, it doesn't seek universal axioms or uses the language of absolute truth, because this is relative to the interpretation of the speaker. This framework recognizes the environmental dynamics that require adaptation, and the multiple ways to conceive this environment according to the identities and rules of different subcultures and the time dimension of their knowledge. Accordingly, it states that in order to understand the usefulness of so many ideas, it is necessary to organize them in mental schemes or cognitive structures. This epistemology, which this research applies to analyze the impact of ecological and rural modernization on oppressed and defiant rural communities, scientifically converges with the postulates of Political Ecology (Zimmerer & Basset, 2003; Moreno, 2005 y Delgado, 2013). According to Martínez Alier (2002) y Greenberg y Park (1994) this concept of science is based on Political Economy, which adopts ideas of the first ecologists, the so called "utopian-scientists", to question the economic system and defend spontaneous knowledge.

Among methodologies used to create knowledge to foster radical social changes, the type called Participatory Action Research (PAR) has captured widespread interest since the 1970s, because of the impact it can generate in a scientific-political context (Fals Borda, 1980). According to De Prada *et al.* (2003), the roots of PAR in Spain can already be found at the late XIXth century on the tradition of collective research prompted by socialist and anarchist movements. Balcázar (2003) y Claro *et al.* (2010) find the origin of PAR in 1946 with the work of Kurt Lewin, who linked his research with activities based on psychosocial theory. Balcázar (2003) divides the PAR process in three phases. The first one is labeled Research, and it takes place when the community reconstructs the history and the current conditions of the situation they regard as worrying or problematic. During the second phase, labeled Education, the community's abilities towards critical thinking are encouraged. This exercise allows identifying the cause of the problems and gives feedback to the whole process until its conclusion.

Interrelated in a dynamical cycle with the former begins the third phase, labeled Action, where the participants can take part in solving their problems through their own resources and tools and in coordination with other groups.

Given that it isn't possible to apply this scientific research framework using preset methods and techniques, Villasante (2007) asserts that it is first necessary to try to understand the specific common sense characteristics of a popular knowledge and its ways of interrelating or defending itself from other world views. It is also recommended that the activity promoter takes part in the process assuming his/her own identity and interests, in order to gain the participant's confidence. Consequently it is a requisite to avoid dogmatisms and promote what Fals Borda calls "Systematic Devolution of Knowledge", which means to leave with the community the scientific results and legacy created by the participants, highlighting its political usefulness for social liberation from alienation in a wider emancipatory process (1980).

This article presents the constructivist application of the first PAR phase with the community of San Lorenzo, during which this community identified a problematic context and concentrated in a structural and central problem to be overcome. The second and third phases of this PAR activity are to be reported in subsequent articles. The problem or "worrying situation" contextualization followed an historical recount since 1974 of the physical, social and political relationships of the community with and around the water resources in their territory. This exercise took into account the peasant resistance that fights for the right to remain in this region, as a way to develop an inherent territorial epistemology committed to transform socio-environmental related threats. In consequence, and following Herrera (2010), emphasis was put on the authoritarian role played by (government and private) institutions interested in this territory and on the impact of the rural development and modernization model on the subsistence of peasant culture and environmental stability. Based on recommendations of authors that defend the political dynamization that arises from an inherent epistemology (Fals Borda, 1980; Santos, 2010) this research followed PAR principles like: articulation of reflection and action to allow not only an analysis of the problematic situation, but also a continuous evaluation of each activity; assumption of the participants as social actors in the research-change process, and the researcher as a promoter of the process; channeling of the active communal participation in an understanding of their reality as both complex and concrete; promotion of a critical conscience among the participants towards an emancipatory interest. From continuous dialogue came an analysis of the state of oppression suffered by the communities, as well as possibilities of transforming their fears and negative beliefs in a state of greater psychical and livelihoods strength. This would allow a better reflection on resistance processes from the perspective of a critical conscience. The objective was to generate communal empowerment by a self-discovery process of their abilities and to strengthen their sense of belonging (Balcázar, 2003; De Prada *et al.*, 2003 y Claro *et al.*, 2010).

The full field study process took place between 2012 and 2014. The research methods and techniques on each occasion depended on the openness of the communities, their time disposition, the amount of participants in a session, the possibility of arriving at the research location, the willingness to participate, weather conditions, etc. The following can be listed as the most significant research techniques: compilation of secondary and tertiary documentation, visits to qualified informers, sharing occupational activities during the work-day of participants, field observations and descriptions, field diary, semi-structured interviews, agreement techniques, participative observations, compilation of life histories, social cartographies, communal food sharing, and visits and shopping at peasant markets.

ANALYSIS AND RESULTS

Approach and Period of Analysis

The analysis of the research results was done using the approach of hydrosocial cycles, which questions the separation of humans and nature present in the conventional hydrological perspective. The Hydrosocial cycles approach conceives nature and society as a unity, and water as a socio-cultural construction constituted by physical, social and political relationships (Boelens, 2014; Linton y Budds, 2014; Schmidt, 2014 y Swyngedouw, 2009). For historical reconstruction, were chosen the last 40 years to include the impact of Salvajina Hydropower Station on the regional modernization process. Salvajina contains the Cauca River since the 1980s and is located previous to the Tuluá and Morales Rivers mouth into the Cauca River.

San Lorenzo's Hydrosocial History through a Collective Construction Process

To construct the knowledge of context from social valuation (Nistal, 2008), spontaneous qualitative methods were chosen to develop collective techniques. Research locations were chosen on January 2012, in places most affected by 2010-2011 rainy season and where is located new infrastructure for water control. To open the analysis to participative action, were developed agreement techniques, interviews in peasant markets and during field walks and "community pots" and accompaniment in participatory process of institutional territorial planning, between others. The materials collected during these collective activities were given back to the participants (Osorio, 2014). So, the first study stage gave a basic place impression of the geo-physical and environmental condition and the second part delivered issues about relation and dynamics related hydrosocial cycle.

Hydrosocial Context of Worrying Situations in San Lorenzo

The research location is the county of San Lorenzo, which belongs to Tuluá municipality (Valle del Cauca, Colombia, South America). Tuluá and Morales Rivers constitute the main hydrological structure in this territory. These two rivers flow into the Cauca River, the second most important river in Colombia, which crosses Valle del Cauca State.

In the current context of communal worrying situations are landslides during the rainy season, which have become increasingly unpredictable. As possible causes can be listed unprotected areas and its surroundings, as well as deforestation. This situation affects the commerce of peasant products, their fields, houses, public infrastructure, the community's public services and the life and economy of peasant families in general. This contrasts with the low level of attention by the government to this problem, and the dubious allocation of public resources to solve it. Likewise, climate variability affects economic and production relationships on the farms. Other worrying situation are: lack of clarity and consistency in the community's political agreements related to the social management of water, absence of adequate infrastructure for water management in the farm and the community, loss of territory and traditional way of life because of imposed and external activities to the communities, loss of traditional communal aqueducts and actual and potential threats from the activities of extractive industries in their territory, which have a commodifying conception of nature. To further develop the worrying situations listed above, a description of the last 40 years history of hydrosocial cycles in San Lorenzo follows: Until the 1970s the community of San Lorenzo had a relationship with water based on observation and respect of natural cycles to warrant the environmental stability of the sources. Therefore, self-manufactured and endogenous technologies were employed to use and manage water in the farms and county. Some farms also used rain water. Water springs were abundant and widespread in the county territories. The aqueduct operation was arranged in a row, which

required solidarity of the first families with the following ones for all to have water availability. Agricultural production was planned according to weather cycles and there was predictability about the outcome of each harvest. There was regularity in the levels of fertility and weather conditions, and chemical products were not used in the field works. Socioeconomic activities centered on traditional coffee production, cattle raising and food production for self-consumption. In general, this way of life reflected the traditional peasant principles analyzed by Van der Ploeg (2008), where autonomous, sustainable and endogenous work practices articulated family roles under a patriarchal authority.

From the 1980s on, the greater importance acquired by coffee production on the international markets fostered a project of rural modernization in San Lorenzo. This started with roads and aqueduct construction in order to increase agricultural productivity. Consequently, there were intensive campaigns with the objective of transforming agricultural practices towards modernization, following the green revolution paradigm. From that moment on, entrepreneurial activity in conjunction with governmental policies and actions started to play a significant role in transforming the territorial landscape and agricultural practices. Its objective was to change the traditional peasant life style, which was labeled as “subsistence agriculture”. The visible consequences of this in the territory was the immigration of populations with different cultures, the rejection of traditional ways of work, decrease of peasant autonomy, cumulative soils and water pollution and intense deforestation.

The fall of international coffee prices since the 1990s signaled an end to the expectative of economic prosperity that was promised to the peasants of San Lorenzo for their adoption of agricultural modernization. This occurred simultaneously with the decentralization of public services in the county, which were justified as measures of governmental modernization (Penning, 2003) and implied a change in the paternalistic central organization of the State. Therefore, this was a time in which the communities were suddenly forced to recur to an already forgotten autonomy in order to solve their environmental and socioeconomic issues. Their peasant way of life, however, was already framed in a socio-productive dependence and in competition with aggressive capitalist markets in deeply unequal conditions. On the other hand, between 1999 and 2002 armed conflict intensified in San Lorenzo through diverse acts of aggression that broke apart peasant families and communities, carried out by guerrilla and paramilitary groups that were fighting for total control of resources, population and their territories. Intimidation and terror were widespread through murder, forced displacements, rape and robbery, being the defenseless peasant population the most affected and most inculpated at the same time. This prompted the migration of a high proportion of this population to the urban centers, which brought a transformation of socioeconomic, environmental and institutional relationships in their territory.

The current situation of the hydrosocial cycle in San Lorenzo faces an acute threat by extractive activities, extensive cattle raising and licit as well as illicit monoculture crops, in territories where forests and traditional coffee crops were located. Therefore, there is loss of land fertility, its water storage capacity, and of water springs. Simultaneously, weather variability has turned even more unpredictable, with serious impacts due to landslides in rainy season and water-related conflicts within the community in the summer season. The inhabitants with links to the community leave then the territory and the new generations try to focus their efforts oriented to other life styles. All this implies increasing difficulties for peasant communities that are still resisting, having now to rely more on “assistance” and productive projects that are offered by public and private institutions, on conditions and relationships characterized by vertical authority and dependence. We can see then how peasant identity and autonomy has lost ground and the rural territories are left to a profit-oriented modernization led by extractive industries and their commodifying conception of nature. In order to give

coherence to the articulation of the hydrosocial cycles approach with the analysis of situations like rural modernization, peasant displacement and armed conflict, very present in San Lorenzo's history and also very common to most peasant communities in Colombia, it is noteworthy to be acquainted with the appreciations of the following authors:

Salazar *et al.* (2007) states that the political geography of war in this territory have created a geographic connection between high altitude corridors in the Central Mountain Range in the departments Valle del Cauca, Tolima, and coffee production regions, where armed groups control illegal activities and marginal populations that are outside the control mechanisms of the State. On the other hand, these authors also consider that the fast paced urbanization in the Valle department can be seen as a structural consequence of war, used by the government on that time as a strategy to re-conquest those territories lost for the State. On this subject, Ballvé (2011) analyzes the state control mechanisms in Colombia aimed at creating a territory functional to the expansion of international trade and foreign investment, where paramilitary strategies converge with territorial reorganization reforms, such like decentralization, which was justified on terms like "institution creation" and "good governance". Grajales (2013) also studies these ways of territorial reconfiguration through physical violence and developmental discourses and practices, where violent means of paramilitary groups are linked to institutional mechanisms, like state subventions for agroindustry, therefore creating a web of legal and illegal strategies to appropriate land for agroindustry. All this adds complexity to the reorganization of the territories and the State's efforts to create new economic structures. This author indicates then how in Colombia crime and violence are essential components of political competition, accumulation, and economic development, being the paramilitary groups the main factor behind large land reallocations in recent years.

Given this situation, it is also important to highlight that defensive reactions and socio-political activism have intensified in the last decade. These have been supported by formal and informal academic groups, which try to articulate different kind of struggles with resistance to the green revolution and legitimization of human and environmental rights. In relation to state decentralization and transference of power to local and community governments, some local state institutions, together with some work associations and NGOs, are promoting communal associations with diverse objectives, being the recovery of ancestral knowledge one among them. In general terms, these associations try to channel international cooperation funds to carry out productive and infrastructure projects on the peasant territories. Furthermore, there have been peace talks going on since 2012 between the Colombian government and the FARC guerrilla (Revolutionary Armed Forces of Colombia). These peace negotiations are to be accompanied with a government project of land restitution to victims of the armed conflict. On this subject, Grajales (2013) asserts that the power imbalances reflected in violent practices of dispossession and accumulation are not a sign of government or market's weakness, but, on the contrary, a feature of liberal democracy and the capitalist market. Following this idea, this author concludes that to focus only in juridical solutions to land conflicts has the risk of legitimating dispossession, instead of disqualifying it.

CONCLUSIONS

During this participatory action research the San Lorenzo communities developed a consciousness of their identity and autonomy loss. This situation has been the result of diverse subtle and aggressive mechanisms. As subtle ones can be listed the communities expectative of better life conditions and improved socioeconomic status by accepting rural modernization. The aggressive ones have been terror and violent pressure to gain authoritarian control of resources, locations and population on these territories. A forty years perspective of hydrosocial cycles in San Lorenzo allowed evidencing that the structural causes of social-environmental conflicts lie on the implementation of the rural modernization

paradigm. These conflicts multiply around the increasing loss of water availability, dispossession of traditional water rights, and loss of natural regulation of water sources, which contrasts with an intense and sudden climate variability. Thus endogenous and environment-respectful life-styles are abandoned, peasant migration to urban centers and their subsistence-related problems become common, and the new generations reject the traditional way of life. On the other hand, the political and institutional structures welcome the establishment of transnational extractive industries on these territories, a tendency that is supported by powerful global policies. It is then evident how the territory is modified to set suitable conditions¹ for rural modernization. This case study aspires to motivate new critical investigations on the real effects of rural modernization on traditional peasant territories, both nationally and globally, where policy inconsistencies and social and environmental injustices alienate peasant populations of an ancestral knowledge that allows them to love and respect their land. The research also wants to continue by exploring forms of peasant resistance that struggle to regain their autonomy and life-principles, amidst a progress paradigm closely linked to peasant dependence, exploitation and marginalization.

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¹ In this case, construction of two hydro-electrical power stations, mineral deposits exploration and militarization by State forces.

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